This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1.–30. (Canceled)

31. (Original) A process for the formation of a phosphate-based glass composts, comprising:

providing a first phosphate-based glass having a first surface and a second phosphate-based glass having a second surface,

processing said first and second phosphate-based glass surfaces to provide a bonding surface,

providing a solution containing a phosphorous compound,

applying said phosphorus compound containing solution to at least one of said first and second phosphate-based glass surfaces,

placing said first surface into contact with said second surface, and

retaining said surfaces in contact until said surfaces are joined together while the composite cures.

32. (Original) A process as claimed in claim 31, further comprising heating the joined surfaces to a temperature below the glass transition temperature of the first or second phosphate-based glass surface.

33. (Original) A process as claimed in claim 31, wherein a vacuum is applied while the composite cures.

34. (Original) A process as claimed in claim 31, wherein the process is conducted at about room temperature.

35. (Original) A process as claimed in claim 31, wherein said step of processing said first and second phosphate-based glass surfaces comprises grinding or polishing.

36. (Original) A process as claimed in claim 35, wherein the resulting surface has a surface feature of less than 200 nm.

37. (Original) A process as claimed in claim 31, further comprising, after the step of processing, cleaning said first and second processed surfaces.

38. (Original) A process as claimed in claim 31, wherein pressure is applied to the phosphate-based glass surfaces.

39. (Original) A process as claimed in claim 31, wherein the temperature of the phosphate-based glass surface is gradually raised during the step of retaining.

40.–46. (Canceled)

47. (New) A process of claim 31 wherein said solution consists essentially of a dissolved phosphorous compound.